

City of Morganton

2015 Wastewater System Performance Report



The City of Morganton operates a wastewater treatment system consisting of a 10.5 million-gallon a day wastewater treatment plant, fifteen sewer lift stations and over 200 miles of collection system. Morganton's collection system operates from the shore of Lake James to the Town of Glen Alpine, to portions of the Salem area and most of the City of Morganton. The collection system is a complex network of piping materials ranging from six inch diameter vitrified clay pipe, plastic pipe, ductile iron pipe and cement pipe up to 54 inches in diameter.

NPDES permit #NC0026573 allows the discharge of treated wastewater into the Catawba River. The wastewater treatment plant is a pure oxygen type facility. Its treatment units are bar screens, flow monitoring, cyclone degritting, primary clarification, aeration, secondary clarification, disinfection and dechlorination before discharge to the Catawba River. The solids process consists of raw sludge removal and storage as well as activated sludge removal to digesters. A dewatering process consists of centrifuge, polymer addition and composting. The composting product is then made available for sale to the public as Morganite.

During 2015, Morganton treated over **1.705 billion** gallons of wastewater. The average daily flow was 4.67 million gallons. The wastewater treatment facility staff continues to strive to improve wastewater treatment quality. Renovations are ongoing and new additions are being planned to alleviate some of the challenges the aging facility has experienced in the past and to provide for future permit demands. The wastewater treatment plant was compliant 11 out of 12 months. In December, there was a weekly permit violation for both TSS and BOD. These violations were due to heavy rainfall which caused hydraulic overloading of the facility. The plant was back in compliance the following week.

Residuals from the wastewater treatment plant are managed through the City of Morganton's Composting Facility regulated by permit # WQ0002127. The facility operates 5 days a week with two full time employees. During the 2015 calendar year the facility processed 1,373 dry tons of residuals from the wastewater treatment plant, producing 480 dry tons of finished compost material, 223 dry tons of which were distributed to customers.

The collection and distribution division monitors the water and sewer system. This small crew of dedicated personnel routinely goes into the lines to maintain and repair them. During 2015, this division maintained 356 manholes, flushed 70,595 feet (over 13 miles) of sewer line and used a robotic TV camera to inspect 4,920 feet of sewer. Collection system crews completed 20 sewer taps during the 2015 calendar year, made 15 repairs to the system and relieved 28 stoppages. Sewer maintenance crews bush-hogged a total of 87,300 feet (16.5 miles) of sewer line right-of-way to give them access to the most remote sewer lines. Morganton's collection system is regulated through permit #WQCS00028.

There were four reportable overflows of the sewer system in 2015. A broken sewer pipe on Bouchelle Street near Sanford Drive was responsible for an overflow on July 13. A grease problem on Bost Road caused a small overflow on October 16. On October 28, heavy rain caused an overflow on Lost Corner Road. Vandalism, involving removal of manhole covers at the intersection of Kirksey Drive and Shore Drive, allowed overflow of the sewer system during a rain event on November 30 to December 1. In each of the overflow situations, City personnel worked diligently to address the causes and to mitigate the overflows.

Annually, City crews use a remote camera to help clean and inspect portions of the sewer system. The City plans to continue to use contractors, when the money becomes available, to augment its preventative maintenance program. The results will be used to identify areas that need to be repaired and to plan appropriate action.

The camera that is used has its own light system and can rotate 180 degrees. The camera can tell if the lines are in good condition or whether there are cracks that are allowing the surrounding soil to fall into the sewer line. Cameras can also locate missing taps or indicate where leaks are occurring. This information tells us if we need to make an immediate repair or if the repair can be scheduled.

Fats, oils and grease continue to plague the collection system. Residential customers should avoid placing food into sinks and sanitary sewer lines. Particles accumulate in the customer's home as well as the collection system causing maintenance issues for the homeowner and the City.

Often our customers are the first to find problems. If you see something that appears to be wrong, please call the 24-hour number for water and sewer utilities at 438-5276.